

ABSTRACT OF THE DISCLOSURE

A system that enables axis-to-axis targeting of an instrument placed within a drill bushing includes a computer, a probe, and a pair of sensor planes mounted to a drill bushing so the planes are perpendicular to one another. The probe has two drive coils that may be mounted near its distal end. The two coils are placed close to one another and are oriented so that when they are selectively coupled to an alternating current source they generate magnetic fields that are orthogonal to one another. The computer receives electrical signals from the sensors in the sensor planes and computes target position, bushing alignment, and bushing orientation values. These values may be presented on a display associated with the computer or used to illuminate directional arrows associated with the drill bushing.